

(MSL-C) and/or membrane spanning lipid D (MSL-D) and, optionally, Linker Lipid A, linker Gramicidin B;

(2) Contacting an electrode containing a clean gold surface with the solution, the disulfide of mercaptoacetic acid (MAAD) or 2-mercaptopropanoic acid (EDS) in the solution thus adsorbing onto the gold surface of the electrode;

(3) Rinsing the electrode with a suitable organic solvent; and

(4) Removing the excess organic solvent used for rinsing, wherein valinomycin is covalently linked to the MSL-C or MSL-D via a linker of appropriate length to permit the valinomycin to diffuse from one side of the membrane to another.

82. (Amended) A method [according to claim 1 of 2] of producing a first layer electrode membrane comprising:

(1) Forming a solution containing Linker Lipid A, the disulfide of mercaptoacetic acid (MAAD) or 2-mercaptopropanoic acid (EDS), linker Gramicidin B, membrane spanning lipid C (MSL-C) and membrane spanning lipid D (MSL-D) wherein the ratio of Linker Lipid A to the disulfide of mercaptoacetic acid (MAAD) or 2-mercaptopropanoic acid (EDS) is 2:1, the ratio of Linker Lipid A + MAAD or EDS to MSL-D is in the range of 10:1 to 100:1, and the ratio of Linker Lipid A + MAAD or EDS to MSL-C is between 20,000:1 and 100:1;

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- (2) Contacting an electrode containing a clean gold surface with the solution, the disulfide containing components in the solution thus adsorbing onto the gold surface of the electrode;
- (3) Rinsing the electrode with a suitable organic solvent; and
- (4) Removing the excess organic solvent used for rinsing, wherein the ratio of Lipid Linker A to the disulfide of mercaptoacetic acid (MAAD) or 2-mercaptoethanol (EDS) is in the range of 5:1 to 1:2.

REMARKS

By this Amendment, multiple dependency of the remaining claims is removed, and the dependence from cancelled claims is avoided by incorporating the limitations of the parent claims.

Claim 81 depended from cancelled claim 13. Claim 13 had been amended during the prosecution of the allowed claims of the parent application and those amendments have been included into claim 81.

Claim 82 depended from cancelled claim 1. Claim 1 had been amended during the prosecution of the allowed claims of the parent application and those amendments have been included into claim 82.

Each of the foregoing amendments have been made to avoid objections under 35 U.S.C. §112 and not to overcome or anticipate any objections based upon the prior art.

Enclosed is a check payable to the Commissioner for \$856.00 to cover the filing fee. The Examiner is authorized to charge any additional amount necessitated by this filing to